

U PPER EAST TENNESSEE COUNCIL OF TEACHERS OF MATHEMATICS



Volume XVI, Issue 2

NEWSLETTER

October 2015

Wanted: Great Classroom Activities

Mathematics Teaching in the Middle School (MTMS) is searching for classroom-tested Mathematical Explorations that are ready for teachers to use with middle school mathematics students. Submissions should include: A description of the classroom-tested exploration, including goals or objectives; reproducible activity sheets for grades 5–9 students; and notes for the teacher, including a suggested launch, guidelines, and questions. Send a copy of your activity to mtms@nctm.org <<mailto:mtms@nctm.org>>. If accepted, activities will appear in the Mathematical Explorations department of MTMS.

Inform Yourself Before You Vote

Get to know your 2015 candidates. NCTM members will be electing four new Board members this fall. The NCTM Board of Directors sets the direction, establishes policy, and oversees the activities of the Council. The newly elected Board members will begin their terms at the conclusion of the 2016 Annual Meeting and Exposition in April. Read bios of the candidates [here](#).



Upcoming UETCTM Meeting

Tuesday, November 10th from 4:00 to 6:00p.m.
@Indian Trail Intermediate School
307 Car IMol Drive
Johnson City, TN 37601
See flyer for more information –Pg. 2

Call for Nominations: NCTM Lifetime Achievement Award

Know a member who has exhibited a lifetime of achievement in mathematics education at the national level? Consider nominating an exceptional colleague who is a member and who has contributed significantly to mathematics education through leadership, teaching, and service. For more info. click [here](#).
**Must be postmarked by
Nov. 6th**



In This Issue

- UETCTM Meeting & Sessions 2
- 2015-2016 Officers 2
- Member Essays 4-20
- Membership Application 21



UPPER EAST TENNESSEE COUNCIL OF TEACHERS OF MATHEMATICS

You are invited to attend
the next meeting of
UETCTM

on
Tuesday, November 10, 2015
4:00-6:00 P.M.

at
Indian Trail Intermediate School
307 Car Mol Drive
Johnson City TN 37601

Schedule

4:00-4:30 Mix and Mingle
(Refreshments Provided!)

4:30-4:40 Business Meeting
& Announcements

4:40-5:00 General Session

5:00-6:00 Session of Choice

UETCTM is the local affiliate of the National Council of Teachers of Mathematics. The organization hosts meetings each school year allowing the opportunity for teachers to network, to share best practices, and to enhance their teaching of mathematics. You do not have to be a member to attend!

For additional information, contact:

Lawrence Nussio— President
Email: lawrencenussio@gmail.com

Andrea Fissel—President-Elect
Email: fissela@jcschools.org

Pam Stidham, Secretary
Email: pstidham@k12k.com

Jerry Whitaker, Treasurer
Email: whitakerj@wcde.org

Ryan Nivens, Past-President &
Newsletter Editor
Email: nivens@etsu.edu

Daryl Stephens, Webmaster
Email: stephen@etsu.edu

The following sessions are scheduled for this meeting:

Math RTI Updates and Q & A (General Session—short session for everyone)

Presented by Ryan Mathis—RTI Math Coordinator—TN Dept. of Education

This is an informal session in which Ryan Mathis will present information and updates regarding the Math RTI process. Time will be allowed for participants to ask questions. This is a great opportunity to get answers to all of your questions regarding math RTI!

SESSIONS OF CHOICE LISTED BELOW (5:00-6:00) - CHOOSE ONE RTI Math Intervention—Focused and Fun

(For Grades K-4)

Presented by Ali Gardenhour and Shannon Suttle—Johnson City Schools

During this session we will explore how to take information from Aimsweb and Easy CBM tests to create a Math lesson that is individualized and interesting. From testing, to lesson plans, to trashket ball, this session has it all. Come join us and learn more about Math RTI.

RTI.....So.....What's Next?

(For Grades 5-8)

Presented by Reva Rhea and Hannah Wilson—Johnson City Schools

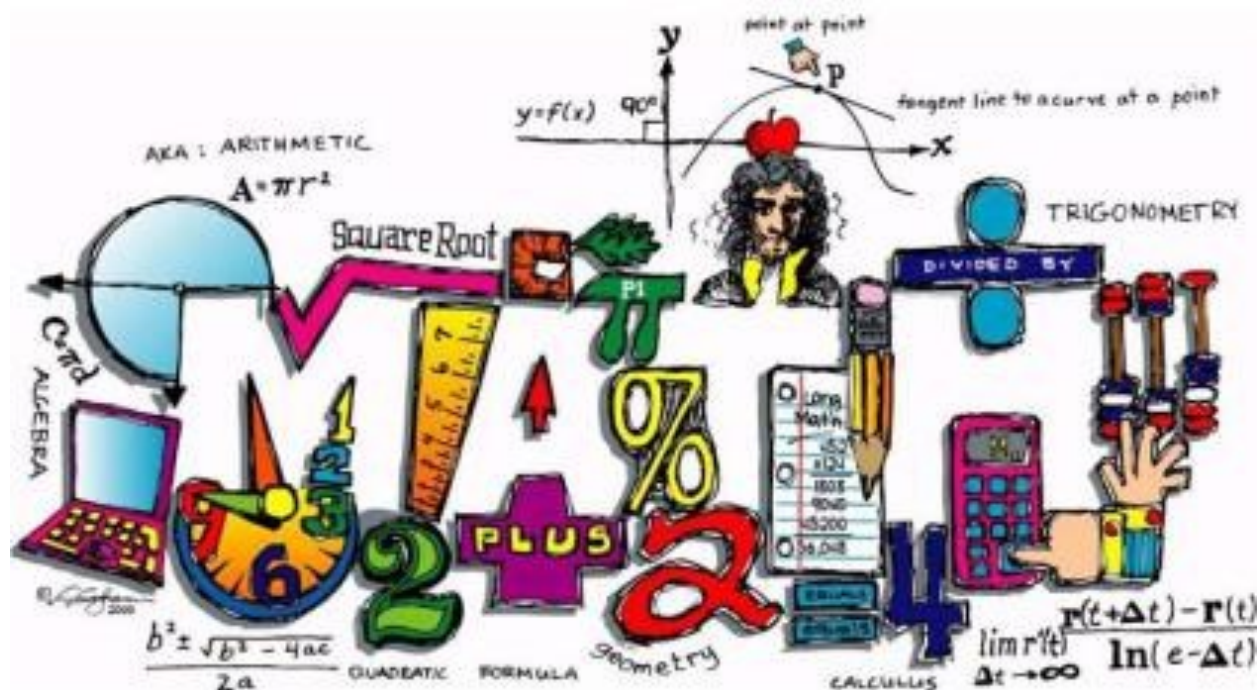
Now that the universal screener has been given, what do we do next? Participants will learn how to look at the data to plan for instruction. Available resources will be shared. Learn ways to plan and progress monitor for Tier 2 and Tier 3 interventions.

Building a Successful RTI Program: What Are The Key Components?

(For grades 9-12)

Presented by DeAnna Martin and Stacy King—Greeneville City Schools

What are the key components for making RTI work for students, teachers, and administrators? Based on foundational research and proven results, learn how an RTI program for math as been developed to be successful for high school students. Learn the key factors of a successful RTI program from materials to organization.



“Classrooms are always changing, teachers must take control and be in charge of the day-to-day operations of the their classroom. Because of the constant changes in schools, teachers must also be flexible.”

- Roy Vermillion



Fluency is Not a Bad Word in Today's Curriculum

By: Kristie Payne

Math fluency is not an out of date concept. Students still need to be fluent when working mathematical computations. As a fourth grade teacher, I incorporate 10-minute fluency stations at the end of each math block. Every student goes to a station and works on a type of fluency. The stations consist of addition, multiplication, division, equivalent fractions, and subtraction. Student must master a station before moving to the next station by receiving a grade of a hundred two days in a row. At the beginning of the year, we work as a whole group with single digit addition and model what must be done in order to complete the addition station. When the student masters the single digit, they move to double digits, and finally triple digit. The number of problems depend upon the number of digits. For example, simple single digit addition has a hundred problems to be answered in 7 minutes. The student then moves to multiplication with single digits, and finally two digits by one digit multiplication. The division stations are one divisor by one dividend. The fraction station is equivalent fractions of $\frac{1}{2}$, $\frac{1}{4}$, and finally $\frac{1}{3}$. The subtraction stations are the last fluency station in which they must master single digit, and double digit. Students who master all fluency stations will then begin working on a decimal fluency station. To track their progress each student keeps a record book of all fluency scores. This is compared to their Benchmark testing so that they can see how mastering a fluency station helps them to improve on their Benchmark testing. Goals are set at the beginning of each nine weeks so that students know where they are and where they need to be before the end of the specified time. The data shows that students who master these stations produce higher scores on Benchmark testing, and build confidence in mathematical computations.

Productive Disposition and Math Intervention

By: Leslie Lyons

As we progress into the second full year of Response to Intervention, it is important to consider any patterns or similarities among the students that have been placed into Tiers II or III. Is there a reason that these particular students have fallen behind grade level? Can we address these issues earlier to prevent the cycle from continuing?

If we consider the strands of mathematic proficiency, it seems that we have students who lack proficiency in each strand. One strand that particularly stands out, however, is productive disposition. Students in both elementary and middle school ranges who have been identified as Tier II or Tier III due to skill deficits all seem to lack productive disposition. They either do not see a purpose for math proficiency, or they have developed a sense of defeat before they even get started. This leads me to question the origination of these ideas. Some of these students come to school lacking productive disposition and then fall behind in other areas as they move through their classes, but many others develop a negative disposition due to the experiences they have within the classroom. So, what can we do to restore a positive disposition toward math as a whole, especially when we may be responsible? We must show our students the “WHY” in mathematics. We must provide a solid foundation for basic math skills so that students see how math is working. We must develop a culture of learning within our classrooms that makes it possible for all students, even those with skill deficits, to feel success and learning.

Nearly all of the Tier II and Tier III math students are screaming for an answer to their question, “WHY?” These students may be in kindergarten or they may be in 8th grade, but they do not see a purpose for the math they are being expected to use. Yes, it is possible that they lack the background experience to truly comprehend a need for math, but that should be no excuse for us. Teachers must show students how and where they will use the math they are presenting. Many students will not give value to math skills without us showing them a good reason.

Students must also see “HOW” math is working. Math is so much more than just a series of algorithms, yet we insist on teaching a series of “math tricks” that force students to conform to a set of rules without truly understanding how these tricks have manipulated the numbers. In many cases, teachers are failing to provide a foundation of learning that provides the use of manipulatives and picture representations that allow students to see how math works. I fear that the reason for this is lack of knowledge and confidence on the part of the teacher. Math symbols and rules are much easier to teach, and they require less effort. Students who already demonstrate skill deficits need our support. They deserve the extra exertion on our part. I believe it will benefit all of us in the long run.

If we want to see a change in math intervention, we must make a change within our classrooms. We have to develop a culture of learning that is safe and positive. It is up to teachers to build a respectful and supportive environment. Students are telling us that they would never ask questions in the regular classroom because they would feel embarrassed. Tier II and Tier III small groups provide an opportunity for these students to ask the questions they need to and feel successful. We must take advantage of this chance and make sure we are allowing learning to occur.

It is critical that our students can feel safe in the classroom, can see how math works, and can ask teachers why. Hopefully, if we implement these ideas within our classes, we will see a productive disposition develop among our most needy students. When we give students a reason and a bolt of confidence will we begin to see real, consistent progress that will lead to improvements in each proficiency strand and only then to grade level proficiency.



Which shape is more rigid ?

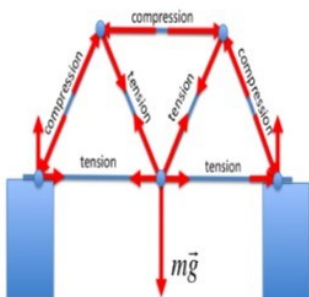
By: Lisa Marcello

REAL LIFE APPLIED GEOMETRY



Understanding the Triangle...

Arrows are forces on hinges!

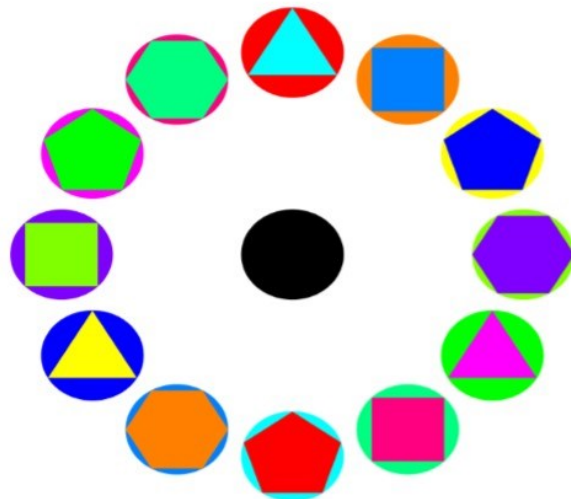


rig·id (rij-id)

1. stiff or unyielding, not pliant or flexible
2. Firmly fixed or set
3. Inflexible

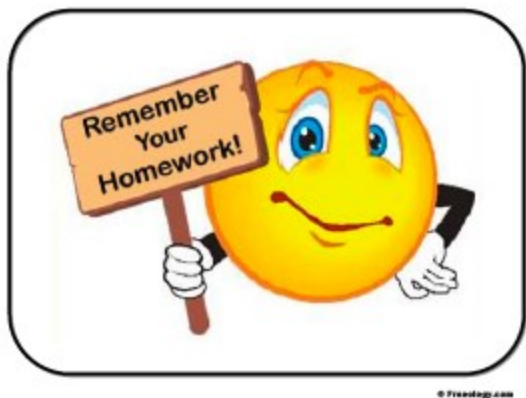
You will need:

- 3 index cards
- 11 brads
- 1 single hole puncher
- Scissors



Directions

- First cut the index cards vertically into 4 equal pieces.
- Then punch a hole about a half a centimeter in each end of 11 of the 12 pieces.
- Next, using the brads create three polygons (a square, a rectangle, and a triangle.
- Finally, apply force with your hands trying to alter the shape.
- Which shape will NOT give way ? Which is more **RIGID** ?



Math Homework

By: Lori Wright

The burning question of just how much homework should be given to students is an ongoing debate. Many teachers, students, and parents are divided over the homework issue. There are many pros and cons of homework. Many that favor homework might argue that homework helps parents see what their child is doing at school; homework teaches self-discipline and time management; and it gives practice with content that is being taught in the classroom. Those opposed might argue that not all students have a level playing field when it comes to the matter of homework, because some have parents who can help them while others do not; students need time to relax or play sports; or that homework might keep students up too late at night.

My philosophy as a teacher is that math students need to practice what they learn. I assign homework almost every day and even on some weekends. I try to give homework that matches what I've taught and is meaningful. Homework should be for practice and never used to intimidate students or given for busy work. Also, homework should never be a punishment. Some students need that more than others. I give students a few minutes to start their homework in class. This helps me answer questions as I walk around the room if students need help. Often homework, started in class, gets finished.

I always go over homework in class. Often I have the answers on the overhead projector or on the board. Students love to put homework problems on the board and I record their names for class participation. I require students to show work on every problem. This enables me to give students quality feedback and lessens cheating. I try to limit going over homework to only fifteen minutes. If checking homework takes more time than fifteen minutes, I know I've not assigned problems that match what I taught. Ever since I've started teaching math, I've collected homework. I have a grading system for homework that both students and parents are made aware of at the beginning of the year. I use a grading scale of 2, 1, 0 points. After students have checked their homework in class, I spend time at home looking over their mistakes. I give two points for every worksheet I've assigned if completed and if errors are corrected, one point if late or incomplete, and zero points if the student does not turn it in. Homework is an effort grade. I don't accept homework that is more than two days late unless the student has been sick or there is another legitimate reason.

In conclusion, I do think that homework is a valuable part of learning. I assign math homework not to give students a grade, but to help students realize that successful practice helps with their learning process. Teaching is not a "one size fits all" strategy and neither should homework. Differentiation should be used when assigning homework. I feel that there is one important aspect of homework that should never be forgotten. How homework is used to promote learning defines its necessity.

Successful Teachers

By: Roy Vermillion

Having taught for a number of years, here are a few things I have learned that have helped me be more successful in the classroom. Success in teaching requires high expectations, if you expect less effort you will receive less effort from your students. In the classroom, students should realize that you have high expectations for yourself and for your students. Create an academic environment that is challenging.

Consistency is important in the classroom. The first week of school is essential in establishing a routine and expectations for the year. Students should know what you expect each day. I post a daily agenda in the classroom and my lesson plans are always available to students and parents online. We have to be careful that our classroom rules and expectations are not constantly changing.

Equality is also an important part of being consistent in the classroom. Teachers should make a concerted effort to be fair by treating all students the same regardless of their gender or the student's ability. Classrooms are always changing, teachers must take control and be in charge of the day to day operations of the their classroom. Because of the constant changes in schools, teachers must also be flexible.

A teacher's sense of humor helps to relieve tense classroom situations. Don't be shy about laughing and encouraging students to laugh. Your classroom is a place where students should not be afraid to make mistakes. Relax and enjoy your teaching. The reward is watching your students grow academically. Make your classroom a place where students are eager to share and participate and also share their love of learning and laughter. By creating a safe environment students are more likely to succeed.

We must also be curious and confident. Teachers should embrace new technologies and continue their professional development by taking workshops and graduate courses. Recently, I read The Energy Bus by Jon Gordon. This book talks about the importance of a positive attitude. When negative situations arise, personally or professionally, it is important that we do not allow negativity to infiltrate the classroom. Be sensitive and versatile to the needs of others. My role models in teaching have challenged, inspired and encouraged students to soar beyond any imagined limits.



Helping Parents to Help Their Children with Math

by Kristie Russell

Parents want to help their children to be successful in the math classroom, but they may not have the financial resources to purchase materials to be used at home. Effective math skill practice can be achieved using everyday items found around the house and in the community. Sharing these easy suggestions with parents will help to extend learning outside the classroom.

Sorting

Sort books, dishes, clothes, and other household items.
Organize items by size or shape.

Measurement

Encourage children to help with cooking. Measuring ingredients allows for practice using real world examples.

Measure items around the house. Ask your child to find something smaller and something larger.

Counting

Count cars, buildings, and signs defined by specific attributes like color and size.
Skip count by 2, 5, and 10.

Time

Encourage the use of analog clocks for practice. So many children rely on digital watches!

Practice elapsed time when choosing television shows or movies. Will I have time for this show or movie before bedtime?

Money

Create math problems using store advertisements. Task children with planning a shopping trip with a budget.

Ask children to predict the correct change when making cash purchases.

Trade equal amounts of money.

Patterns

How many patterns can be found in your community? Windows, grocery displays, and advertisements are just some examples of possible patterns in the real world. Look for patterns in books and songs. Predict what will come next.

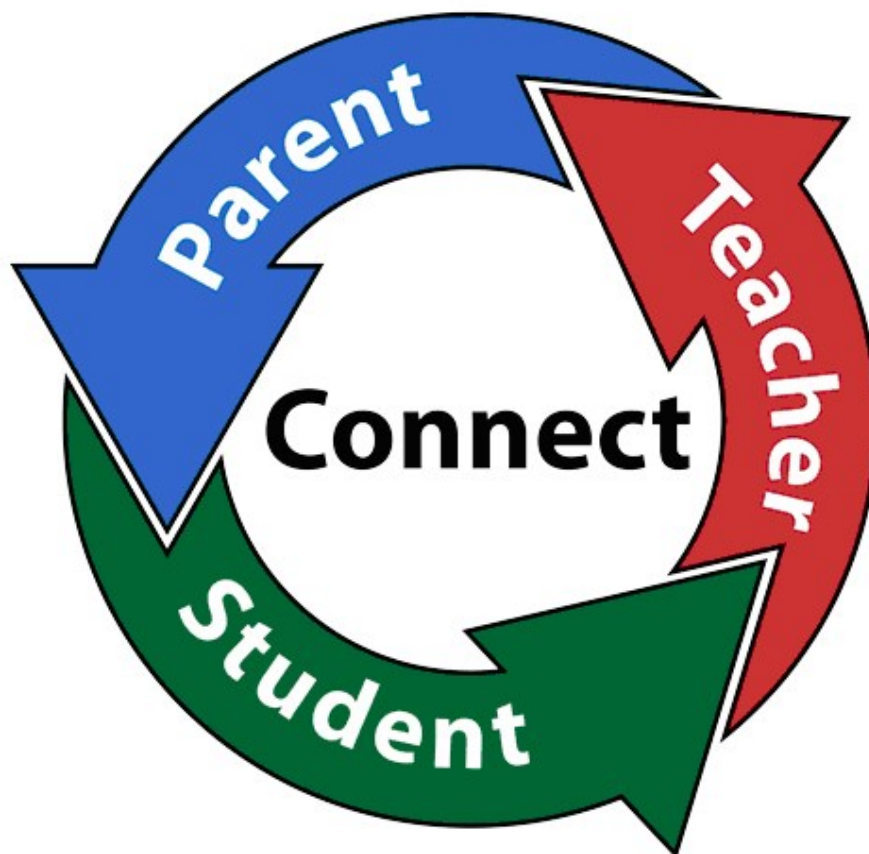
Games

Use board games that involve counting and logic skills. Make up games using dice, dominoes, and playing cards. Addition, subtraction, multiplication, and division problems can be created easily.

Literature

Your local library offers many books with math themes. Also, story hours and summer activities include many learning opportunities.

Look around for learning! There are opportunities everywhere!



An Open Letter to New Math Teachers

By: Amanda

Dear New Math Teachers:

As I thought about which topic to write about, the only thing that kept coming to my mind was the experience I had in the 2015 Eastman MathElites. But before I get there, let me give you a brief back story. I graduated in May 2014 from an initial licensure program, called Masters of Arts in Teaching. I loved this program and have high regards for it. While I was not a math major, I believed, though, that I was quite competent in mathematics. I always enjoyed it and made good grades. I believed that I was ready to teach it and explain every skill wholly without problem. I just completed my first year of teaching middle school math, and I quickly learned that I am not as great at math as I thought. With the implementation of the new TNCore standards, teachers must present the material in far different ways than we learned it while we were in school. We are teaching kids to think in ways some of us have not yet mastered. So, I've decided to share my experience from MathElites 2015 and how it's made me become a better, more confident, and more efficient teacher.

When I learned that I was going to be a student in the MathElites program, I was beyond ecstatic. I was excited about learning new methods, learning about new classroom tools, and learning about math beyond an expression or equation. On the first day, I was eager and excited to delve into this class, but after a few days I slowly began to feel less and less competent in myself and my abilities as a math teacher. I started getting extremely nervous before class in hopes of not having to answer, or to work with others. I felt like I had failed my students last year and failed myself. During class, I wasn't making the connections and applying how I learned the skills to the new way of learning the skills. I had beaten myself up so much that I hadn't even given myself an opportunity to learn. So, I am going to share with you the biggest things I took from my experience as a new math teacher in a class full of math-minded, veteran teachers.

It is okay to struggle. As I was sitting in that classroom, listening to person after person who really had a deep understanding of what was being presented, I felt defeated. I couldn't understand why I couldn't comprehend the material like everyone else. It was quite a humbling experience; I felt like one of my students, which gave me a new perspective on how to handle the struggling learner. We've all heard it before: "there is power in the struggle." Truer words have never been spoken. That is where so much learning takes place, and I gained a greater and deeper knowledge of mathematical skills through that struggle. I have come to terms that it *IS* okay, as long as you take something away from it. There is no shame in it. Remember that.

Put yourself out there. Our professor would ask us for input or ask us to share our thinking. I would sit there wanting to answer but felt so intimidated by the intelligence of the veteran group that I would never volunteer to share. Usually, when the correct response was given, it would be close to what I was thinking...or dead on! Missed opportunity after missed opportunity to build my confidence. What a shame. I urge you to put yourself out there even if you are wrong! It will almost always yield positive results!

Use your resources. You don't realize the amount of resources you have until you sit down and think about it. We have our curriculum specialists, professional learning communities, professors, the Upper East Tennessee Council of Mathematics Teachers, and various online resources to help us with teaching and learning. It's important that we use these resources for our optimal benefit so that we can be the best for our students. Keep seeking out information on best practices, on how to deepen your own understanding, and how to translate that to your students. Seeking out mentorship and asking for help has been the turning point for me. I am no longer trying to do it all on my own. There is strength in numbers.

Stay positive. No matter what goes on, make sure that you try to see the bright side in every situation. While MathElites was a struggle for me, I always went home and talked to my husband about the positive things that happened. Of course we talked about what was difficult, but we would turn the negative into the positive also. "I may have had a hard time catching on, but at least I know a lot more about it now." Being positive can make a world of difference when you're having a hard time; it can be a game changer. So, stay positive and you'll get through it!

As a new math teacher, I hope that sharing my experience with you has given you some solid advice and something to relate to. Remember, we are new to this profession and it will take us a couple of years to begin perfecting our craft. Keep at it, never give up, and always remember why we do what we do. The more we work on ourselves and benefit from opportunities that allow us to learn and grow, the more our students will gain and achieve!

With Much Love,

Amanda V.

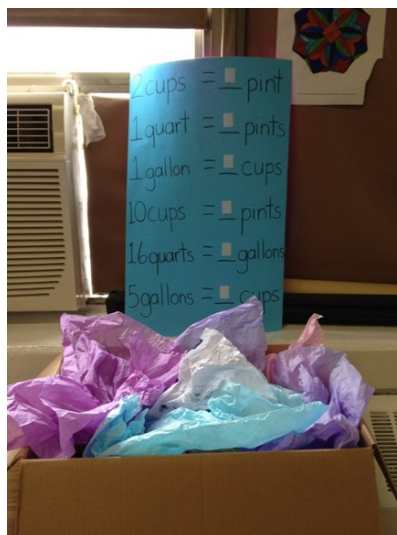


Math

As a math intervention teacher this year, I taught only students who were performing below grade level in math. Most of my students told me that they were not good at math, and they did not like it. All of my students had at least one other math class; some of them had two. I wanted to keep them engaged and help them make as much progress as possible. I knew that I would never achieve this by giving my students tons of worksheets. I had to find another way, so I planned to make math intervention as fun as possible. I tried to find some type of game or hands on activity for every lesson I taught. I used computer games, board games, dice, cards, and anything else I could think of. I found many of the games online and created some myself. In math intervention we focused on skill gaps, not standards. However, I always tried to make connections between the skills I was teaching them and the grade level standards they were learning in their other math classes. It came to my attention that many of my students were struggling to solve word problems involving measurement, partly due to the fact that they did not know how to make conversions. I knew that I needed to teach my students how to make conversions within the customary and metric systems of measurement, but how was I going to make it fun? After all, measurement conversions aren't exactly exciting. I searched online for conversion games, but I couldn't find anything that looked even remotely engaging. I racked my brain for game ideas, and I finally managed to create two games that my students loved and that effectively taught the skill of conversions. The Conversion Game Show Challenge is for teaching U.S. customary measurement conversions and Metric Soup is for teaching metric conversions.

Conversion Game Show Challenge

Apparently, I was watching a few too many shows on the Game Show Network when I came up with this idea. Before playing the game we made a graphic organizer of customary conversions which the students were allowed to use during the game. Then I made game boards that had a column of measurements and a column with blanks for the appropriate conversions. I put Velcro on the back of the answer cards so they could be attached to the game board. Then I hid the answer cards in boxes full of random junk, such as tissue paper, rubber balls, plastic eggs, and plastic bowling pins. Now for the fun part. I went into full-on game show host mode for this activity. I called the student teams to the front of the classroom in "The Price Is Right" style. "Welcome to the Conversion Game Show Challenge!" I called out in the cheesiest game show host voice that I could muster. "Justin, come on down. You're the next contestant on the Conversion Game Show Challenge!" At first, the students looked at me like I had grown another head, but it didn't take long before they were completely engaged. Each team had their own game board and box filled with junk and answer cards. The object of the game was to find the hidden answer cards and make the correct conversions on the game board before the other teams finished. My students loved the game, and more importantly, they mastered the skill.



Metric Soup

As with the customary conversions, we made a graphic organizer for metric conversions before we played the game. I made a fill in the blank metric conversion worksheet. I explained to the students that we were making "Metric Soup." Each one of their answers had a corresponding ingredient for the soup. What I didn't tell them was that only correct answers corresponded to ingredients that someone would want to eat. I put the ingredients inside of paper bags and wrote the answers on the outside of the bags. I put the correct answers on some bags, but I also made many bags with incorrect answers. The correct answer bags contained ingredients such as gummy bears, m&ms, caramel corn, and chocolate chips. The incorrect answer bags contained things such as shredded paper, pencil shavings, Styrofoam, and toilet paper. I instructed the students to find an answer bag for each of their conversion problems, but not to open them. Once the students had bags for all of their answers back at their tables, I told them they could open their bags and make their soup. Their reactions were priceless! Students with pencil shavings and toilet paper were asking me if I expected them to eat that stuff. I told them they could trade their nasty ingredients in for the good stuff if they made corrections and explained to me where they went wrong. Every student was able to correct their mistakes and obtain the yummy ingredients. They had fun learning a skill that is usually anything but fun.

The best part about these games is that they could be adapted to work for other skills. The games required a lot of preparation time, but they were worth it! If the students aren't engaged then our efforts are wasted. Why not spend a little extra time to create an activity that grabs our students' attention and makes them want to learn the skill?



Hello, Is Their Anyone Out There?

By: Jonathan McClain



Teachers often feel this way when it comes to instruction and curriculum. Have you ever walked into a dark room, wondering if someone is in the room? You fumble for the light switch, feeling up and down the wall trying to find the switch. You panic, get scared and leave the room. You say to yourself “If I could have only found the light switch

I would have felt better in that room. I would know where I am going and how to get there”. This scenario can correlate directly to the classroom and curriculum. You feel lost, with no clue as to what is going on around you or to how you should guide your students. As teachers why do some of us feel that way sometimes? There is hope, there is a “light switch”, it is not because of a lack of support or resources.

One way I have found the “switch” and turned the lights on in my teaching career is through Professional Learning Communities, better known as PLC. PLC’s are all around us; sometimes we just do not realize it. Several years ago the Bristol Tennessee City Schools began regular PLC meetings. At first these meetings took place within grade groups. Then the PLC meetings evolved into vertical team meetings. Third grade teachers would meet with Second grade teachers during one PLC, the next meeting may be with third and fourth grade teachers and so on. These meetings have since progressed into meetings with grade level and content teachers from other schools by using a video chat program similar to Skype or FaceTime. Agendas were developed, minutes were recorded, and questions began to get answered. Ideas started to flow, the lights were being turned on. Like the warm glow of a fluorescent light being turned on. The flicker became a bright illuminating source of light that forced out the darkness of the scary room. Then you realize the room was not empty, in fact it is full of people just like you all looking for the “light switch”.

These PLC meetings come in various shapes and sizes and sometimes you do not even realize you are in the presence of the PLC. Some examples of PLC are in-services, workshops, grade level meetings, subject matter meetings and staff meetings to name a few. Educators have different ideas and views, and when these can be shared with other professionals the stakeholder becomes a direct benefactor of the knowledge being shared. I would advise and encourage everyone to continue to participate in PLC meetings. If you are not a part of PLC start your own PLC, keep it simple with clear goals in mind. Practice professional courtesy and keep an open mind. Strive to keep the lights on for other educators who may be wandering in the dark.

Incorporating Technology With Limited Resources

By: Brittney Marsh

As most of us know, technology is the big thing in education these days. A lot of schools are going to a one to one ratio with students to laptops or students to iPads. Students are completing their assignments online and submitting them through various programs like Moodle, Schoology, Blackboard, and more. Teachers are uploading assignments and instructional videos through these programs for students to complete and watch. Students are working at their own pace through the assignments, and have access to go back and re-watch an instructional video as needed.

The purpose of this article isn't to talk about how great technology can be in the classroom, because I am sure we have all heard the pros and cons. The purpose of this article is to provide schools with limited technology resources, ways to incorporate technology in the classroom. I come from a classroom with one student computer and one iPad. Luckily, my school does have 3 computer labs and 2 mobile labs that we can have access to. However, we have 12 teachers trying to use these labs within the school.

With the state going to testing only online, students need to have practice with as much technology as they can. Here are some ways that I plan on using technology in my room with limited resources:

Sign up for a computer lab or mobile lab at least 1-2 times a week. Of course I would love to use them more, but I have to share. During these times, I plan on having my students practice on the MICA website to get used to the new state test. I also plan on having them practice doing assignments online.

Use the student computer and iPad as a partner station. Having students working in groups on an assignment online is better than not having students use technology online at all. Of course we would all love for students to have their own device, but sharing one is beneficial too.

Have students bring their own device. A lot of students now have some sort of technology device that they use, whether it's a phone, laptop, or iPod. Allowing students to bring their own device allows you as a teacher to incorporate technology more frequently, instead of waiting on a lab to use.

While technology in the classroom sounds like an amazing idea, there are a few important things to remember:

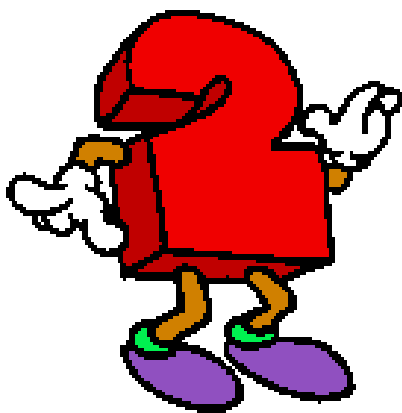


Not all students know how to use technology. I think a lot of times that we assume that all young people know how to use technology. However, this is not the case. Make sure that your students know how to use the device they are using, and make sure they know how to use the program that you want them to use. This may take a couple of days to get started, but they will catch on.

Set clear rules and boundaries. Make sure your students know what is expected of them and what they are not allowed to do. Most schools have a filter on the Internet for certain things, but pay attention to what your students are doing. If you are allowing them to bring their own device, make sure they understand when they are allowed to use the device and when it should be put away.

I am really excited for this year and to start incorporating more technology in my room with limited resources. I think that the students will really enjoy it, and they need to get as familiar with technology as possible before the state test. I think this will make learning more fun, more engaging, and more relevant to the students.





Year Two...

By: Adam Hood

In my first year as a math teacher, I felt that there were high expectations for me to perform my job. In that year, I learned many things about myself as a teacher and what I needed to develop in order to become better. Like many other things, I believe that one cannot fully understand how much he knows about a particular content until he tries to teach someone else and that became evident in my job as a teacher. I believe that going into this second year as a math teacher, I will be better prepared to perform my job. Like I said, the expectations were high last year. However, this is Year Two and expectations only go in one direction.

As a teacher or in any other type of profession, our ultimate goal should be to improve. The one thing I think of the most about my profession is how I can be better for my students. With what I learned from last school year and the skills and task that I gained this summer, I feel that I am going into this school year with a lot better understanding of what I want my students to learn and how it can best be accomplished. Being able to differentiate instruction in different ways while leaving questions open-ended in order to allow creativity and different learning techniques to be exposed is something that I learned a lot of this summer and feel will be crucial for the maximum learning of my students.

A former professor of mine wrote on the whiteboard one day during class, "Who is doing the thinking?" Looking back on my first year of teaching mathematics I probably did about 90% of the thinking while my students did about 10%. Obviously, I am aware that these percentages need to be flipped. Going into Year Two, I am now aware and ready to stop thinking,.. listen,.. and be ready to agree or disagree while only giving little guidance. After going through this summer, I learned firsthand that this is the only way to get maximum thinking out of students.

So Year Two,...although the expectations will be higher, I am ready. Besides, if we are not raising the bar ourselves, what is the point? I want to be better not for my administrator but for myself and most importantly for my students.

By: Jeannette Hurd

As we reflect upon past years, and look forward to new ones, we all vow to focus more on vocabulary and writing. We post word walls and have students define words. How many times have you had students complete vocabulary graphic organizer, or make a foldable, or glue a page into a notebook? We communicate with our students, their parents, other teachers and administrators. However, we often forget that effective communication works both ways. We strive to foster open communication in our classrooms in so many ways. Often we miss the mark as we try to be clever or technology savvy. The truth is, accepting a poorly written sentence, or horribly misspelled vocabulary word may make the difference between a response and no response at all. We need classrooms where open dialogues can take place and written communications are used by students and teachers.

Matching worksheets are a thing of the past. If we expect students to use and genuinely understand the vocabulary of mathematics we need to use it every day. Students need the opportunity to practice new vocabulary in context. Have students explain their understanding to a partner, not just “parrot” a definition. Eavesdrop; it is the best way to find out what the students are really saying to each other. Tell them when they use vocabulary correctly, or when they describe their reasoning and it makes sense. When it doesn’t make sense, don’t make a scene. Don’t limit your writing to summaries at the end of class. Have everyone write a sentence about a problem then share with partners. Keep a math journal where students can draw a picture and describe their understanding at the start of a unit and at the end. Give students that chance to share when you know they will be successful. Positive praise is still our greatest motivator for most students. Everyone likes genuine and positive feedback.

We often get, “I put the big number in the house and the little number outside. Then I divided”, when we ask students to explain their steps toward solving a problem. As teachers, we wonder where we went wrong. The sad truth is some adult used that exact description first. Yes, it helped the students understand the procedure in that instance. However, the “big number” won’t always be the divisor and it will hurt them later. Students have heard terms like dividend and divisor. Most teachers do not use math vocabulary consistently. We need to talk the talk as it were.

If math teachers hate to hear “I’m not good at math”, then as teachers are we really helping students when we tell them, “I am no good at writing or spelling”? I suggest that we model that writing. Ask students for help writing a group summary of what we did in class. Give students an opportunity to brainstorm and reflect, share ideas with a partner, then the whole class. Construct a summary using their ideas. If they are way off track, consider this a formative assessment that can be used to guide your planning for the next class. If the students don’t know what you had them doing, then they must not have been working on YOUR learning target

Students today want most for their learning to be interactive. Give students that opportunity to communicate.

When they have that solution that makes sense and they described it to a partner, let them share it with the class.

Have students use technology to record their discussions or to help them brainstorm, compose or explain. Even the shyest students will want to contribute somehow.

Have students stand up and move around as you review.

R.A.F.T activities are a great way to differentiate and still have students writing.

Tell students in advance they will be individually taking notes that will be combined with a "Team" of other note takers for the day to summarize the lesson. Then give students time at the end to share their notes and create a group summary that can be posted to a website or kept in a class binder.

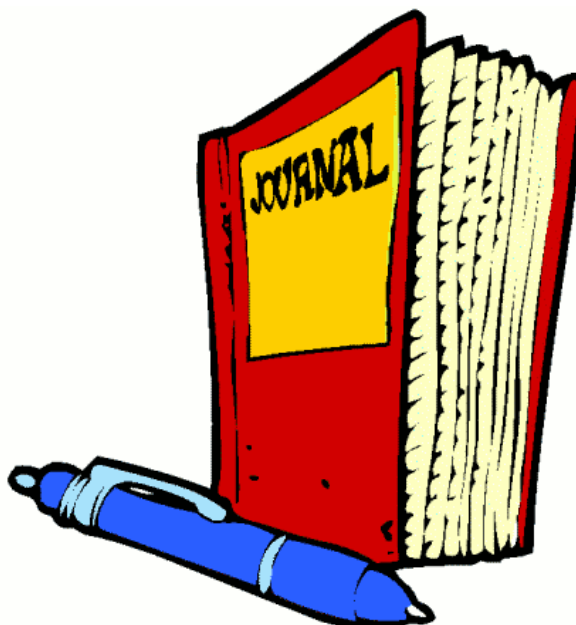
Keep up with the math journal and give students time to go back and reflect on how their understanding has changed.

Writing can be quick and frequent explanations, or longer reflective or project based assessments. My students enjoyed making short audio clips of them reading definitions, then trying to explain what it really meant to another student. It gave me great formative data, and it gave the students immediate feedback about their own understanding.



Before brainstorming and planning your writing, analyze the assignment using RAFTS

- R** **OLE**
(Who am I as the author of this piece of writing?)
- A** **UDIENCE**
(Who is my audience? ... peers, adults, younger children, community at large)
- F** **ORMAT**
(What format should I use? ... friendly letter, narrative, essay, etc.)
- T** **OPIC**
(What is the topic?)
- S** **TRONG VERB**
(What is my purpose/reason for writing? Some strong verbs are convince/persuade, explain, reflect, tell, enlighten, entertain, describe, review, inform, evoke emotion)





MEMBERSHIP APPLICATION

Mail completed for m to:

Jerry Whitaker
Mathematics Curriculum Coordinator
Washington County Schools
3089 Highway 11W
Blountville, TN 37617

Membership Fee \$10 Payable to: UETCTM

Name: _____

Home Address: _____

Phone: () _____

School: _____

School Phone: () _____

School Address: _____

Email Address: _____

The Upper East Tennessee Council for Teachers of Mathematics is an organization for anyone I involved in mathematics education from pre-school through college in the greater Tri-Cities region. The purpose of UETCTM is to promote excellence in teaching mathematics and to share best practices among mathematics educators.